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1   1.   (Previously Presented)   A method of generating contour lines from

2   elevation data, the method comprising the steps of:

3   a)   selecting a first data point from the elevation data;

4   b)   setting row and column data to an initial contour value, the row and

5   column data comprising a first state;

6   c)   comparing a second data point with the first state for determining an

7   existence of a contour line depending on a result from the step of comparing;

8   d)   updating the first state to a next state, wherein the next state comprises a

9   next row and column data, if the contour line exists;

10   e)   creating a portion of a contour line image, if the contour

11   line exists;

12   f)   proceeding to a next data point; and

13   g)   repeating steps b) through f) for a next column or row.

1   2.   (Original)   The method of claim 1 wherein the step of proceeding

2   comprises proceeding in a predetermined direction.

1   3.   (Original)   The invention of claim 2 wherein the step of proceeding in

2   a predetermined direction comprises proceeding in predetermined row and column directions.

1   4.   (Original)   The method of claim 1 further comprising the step of

2   selecting a contour line interval.

1   5.   (Original)   The method of claim 1 further comprising anti-aliasing the

2   contour line image.

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1   6.   (Original)   The method of claim 1 wherein the step of updating

2 comprises determining if an elevation point row and column data exceeds a current row or

3 column base elevation by a value greater than a contour interval.

1   7.   (Previously Presented)   The method of claim 1 wherein the step of

2 updating comprises storing the next state in a memory.

1   8.   (Original)   The method of claim 7 wherein the step of storing

2 comprises storing the row and column base elevation.

1   9.   (Original)   The method of claim 1 wherein the step of creating

2 comprises drawing the portion of the contour line image.

1   10.   (Original)   The method of claim 9 wherein the step of drawing

2 comprises displaying the portion of the contour line image.

1   11.   (Original)   The method of claim 1 wherein the state of creating and the

2 step of repeating comprises creating an entire contour line image.

1   12. (Original) A method of transforming input elevation data into a real-

2 time contour plot image, the method comprising the steps of:

3   a) selecting an ordering sequence;

4   b) selecting a contour line interval;

5   c) determining initial row and column base elevation values;

6   d) . selecting a first data point;

7   e) determining whether a contour line point has been detected by comparing

8 the row base elevation value or column base elevation value plus the contour interval to the

9 elevation data;

10   f) drawing a portion of a contour plot image;

11   g) updating the row and column elevation values to a highest contour interval

12 multiple less than a elevation data point;

13   h) moving to a next data point; and

14   i) repeating steps e) through h).

1   13. (Original) The method of claim 12 wherein the step of determining

2 initial row and column base elevation values comprises selecting a contour elevation closest to

3 but not exceeding the first elevation value in the row.

1   14. (Original) The method of claim 12 wherein the step of drawing and

2 the step of repeating comprises drawing an entire contour line image.

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2   15.   (Previously Presented)   An apparatus for generating contour lines

3   from row and column data, the apparatus comprising:

4   a first data point from the row and column data

5   comprising a first state;

6   a means for comparing a second data point with the first

7   state for determining an existence of a contour line depending on a result from the means for

8   comparing;

9   a means for updating the first state to a next state, if the

10   contour line exists;

11   a means for creating a portion of a contour line image, if the contour line

12   exists;

13   a next data point for comparing with the next state by the means for

14   comparing, the next state comprising a next row and column data; and

15   a means for drawing an entire contour line image from a plurality of

16   portions of contour line images created by the means for creating.

1   16.   (Original)   The apparatus of claim 15 wherein said means for creating

2   comprises a display.

1   17.   (Original)   The apparatus of claim 15 further comprising memory for

2   storing the next state.

1   18.   (Original)   The apparatus of claim 15 further comprising a means for

2   anti-aliasing the entire contour line image.